

Why You Should Buy a Phase Identification System

Remote phase identification systems have only been available for a few years. They are still a new concept to much of the industry. If you have not considered this type of tool in the past, you should take a fresh look at what the latest systems can do for you. They are a time and cost savings tool whose use will become more and more important in the future as utilities strive to cut operations costs and improve service. Here is a short list of benefits obtained through the use of a phase identification system.

Geographical Information Systems (GIS)

These systems are only as good as the data they contain. When GIS phase attribute data is incorrect, the usefulness of these important data bases are greatly diminished. A phase identification system allows you to easily and accurately correct your phase maps.

Reduce Outage Management Errors

An accurate outage management data base allows a utility to instantly determine which feeder has tripped based on customer outage calls. However, if the phase attribute data associated with individual customers is wrong, time is wasted directing a troubleman to the wrong fuse or breaker. A phase identification system allows you to correct these data base errors.

Load Imbalance

As new customers are added, or due to seasonal load changes, feeder loads may have to be re-balanced by switching loads from one phase to another. If the phase load being switched is connected to one that is not accurately known, phase balancing becomes a time consuming and frustrating process. Instead of moving load from “C” to “A”, you might be really moving load from “B” to “C”, which makes the problem worse instead of better. With a phase identification system, cables can be accurately tagged.

Wasted Crew Time

Hours are wasted daily with entire crews waiting while attempting to identify phasing. The current practice of “driving a line” to determine phase is no longer necessary. A phase identification system can accurately determine phase anywhere in a matter of minutes.

Neutral Current

This is an area utilities have not spent much attention to because, prior to the availability of phase identification systems, there was no cost effective way to address it. Neutral current is caused by unbalanced phase currents and results in wasted energy. Although not possible to totally eliminate neutral currents, reducing them by using a phase identification tool to balance feeder currents throughout your system can save hundreds of thousands of dollars per year in wasted energy costs.

Why you should choose the Origo PhaseID System

Take a close look at the phase identification systems on the market today. We believe you will come to the conclusion that there is really only one choice; The Origo PhaseID System. Here’s why:

Not Dependent on Cell Phones

Although cell phones are a technological wonder of our times, poor coverage and dropped calls make them frustrating to use even for normal conversations. Depending on them for your equipment to work is unacceptable. The Origo PhaseID System does not require cell phones or any other real time communications to operate.

Phase Attributes Identified.

The PhaseID System automatically indicates all 12 possible phase attributes. On primaries, phases A, B, and C are identified. On secondaries, phases are identified as A, -A, B, -B, C, -C, AB, -AB, BC, -BC, CA, or -CA. That is, the two primaries feeding delta connected transformer secondaries, along with the in-phase and out-phase of normal 120 volt service, are identified.

Base Station Location

The PhaseID System base station is designed to be placed in dispatch centers where multiple individuals have access to it. Just plug it into any wall outlet. The outlet can be on any one of the 12 possible phase attributes. The Base Station LAN output allows different users on different PCs to simultaneously retrieve phase attribute data. Reports are automatically printed if desired.

GPS and Cell Connect Time

The GPS lock time on the PhaseID System field unit is on the order of 1 minute when first turned on and on the order of 10 to 20 seconds when off for less than 2 hours. The advanced roving GPS receiver requires no lock time at all when left on. Of course, no cell phone modem lock time delays are ever required with the PhaseID System.

Long Battery Life

The PhaseID System operates approximately 20 hours on 3 AAA batteries. That is two full work days of continuous use and months of occasional intermittent use.

Size, Weight, and Ease of Use

The PhaseID System field unit weighs about 3 lb. and has a single push button switch to operate. No data interpretation skills are required by either the field unit or base station operator. The unknown phase attribute, out of the 12 possible phase attributes, is automatically identified by the base station computer.

Can be Used in Buildings

The PhaseID System GPS receiver can maintain timing lock with a single GPS satellite in view. It also incorporates a highly stable internal oscillator that allows timing lock to be maintained for up to 5 or 10 minutes without any satellites. Once locked, the field unit will usually maintain lock indefinitely inside most buildings and can be used inside totally shielded vaults or buildings for short periods to obtain phase attribute readings.

Field Probe Ground Reference

The PhaseID Field Probes incorporate a ground clip to ensure phase voltage measurements are made with respect to ground. Without a hard ground reference, phase measurements made on one phase, in a crowded 3-phase environment, will be referenced to a second phase (or a combination of phases and ground) which can lead to phase errors.

Low Cost Field Probes

An unlimited number of field probes can be used simultaneously with a base station. Additional probes are very inexpensive, so it is cost effective for every lineman that needs one to carry one.

Quickly Phase Identify Your Entire System

Origo’s soon to be introduced handheld Data Logging field probes can be used by meter readers to record phase attributes during their normal rounds. In a matter of months, a utility can completely phase identify their entire system in a cost effective manner using low cost existing personnel.

Fast as Real Time

With the PhaseID System, probing 1 to 3 cables on a typical maintenance job and calling in the phase sequences, takes less time than unpacking, setting up, and waiting for cell modem and GPS lock in a multi-unit real-time system. Probing 20 padmount transformers in a subdivision with the PhaseID System takes a fraction of the time required using current real-time systems.